

ORGANIZATION OF AFFILIATED
SECURE INTEROPERABLE RF
SUBSYSTEMS (OASIS)

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Kathleen David,
Deputy Director of
Operations and
Maintenance, General
Mitchell International
Airport, Milwaukee County

May 22, 2017

The Honorable Chris Abele
Milwaukee County Executive
Milwaukee County Courthouse
901 N. 9th Street, Room 306
Milwaukee, WI 53233

and

The Honorable Mayors,
Village Managers,
and Executives of OASIS
Subscriber Organizations

The Governance Board of the Milwaukee County OASIS Public Safety Radio Subsystem, in accordance with Section 6.05 of Exhibit F of the Intergovernmental Agreement Permitting Access to Milwaukee County's Public Safety Radio Subsystem, has prepared and approved this 2017 OASIS Annual Report.

This report includes an Annual Operational Budget (Appendix C) while also detailing the Capital Improvement Fund commencement in 2018.

By submission of this Annual Report, we hereby acknowledge:

1. We have at this time no recommendations for changes to the operational and technical design of the subsystem.
2. We have at this time no recommendations for changes to the funding model or operational standards needed to meet the costs for subsystem operations and maintenance.
3. We have reviewed and we recommend the 2018 Operational Budget for the subsystem, as presented in Appendix C.

We remain available to provide additional information regarding the state of the operations, finance, governance, and overall plans of the Milwaukee County subsystem of OASIS.

Respectfully submitted on behalf of the Governance Board of the Milwaukee County OASIS Subsystem,

DocuSigned by:

Andy Pederson

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Andy Pederson
Governance Board Chair

DocuSigned by:

Christine Westrich

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Christine Westrich
Governance Board Vice Chair

**OASIS Public Safety Radio
Governance Board 2017 Annual Report**

OASIS – Organization of Affiliated Secure Interoperable RF Subsystems

1	1	Scope, Purpose, and Background.....	2
2	2	OASIS Operations.....	3
3	2.1	Design	3
4	2.2	Users.....	4
5	2.3	OASIS Goes Live.....	5
6	2.4	OASIS Project Milestones.....	6
7	2.5	The Way Ahead.....	7
8	3	OASIS Governance.....	8
9	3.1	The Shared Core MOU	8
10	3.2	The Municipal Use IGA.....	9
11	3.3	The Governance Board & Tech/Ops.....	9
12	4	OASIS Finances.....	12
13	4.1	Capital Build-Out Budget.....	12
14	4.2	System Usage, Usage Fees, and Operational Costs.....	13
15	4.3	Capital Improvement Fund	14
16		APPENDIX A: OASIS Project/Capital Expenses & Budget.....	16
17		APPENDIX B: OASIS Usage Fee and Capital Improvement Projections (2017 – 2022)	17
18		APPENDIX C: Milwaukee County OEM Radio Services 2018 Annual Operating/Maintenance Budget.....	18
19		APPENDIX D: Process for Provisioning an OASIS User Radio (Software Updates and Programming).....	19

I Scope, Purpose, and Background

This second annual report provides an overview on the current state and future planning for the OASIS Public Safety Radio Subsystem in Milwaukee County.

OASIS is the radio system that provides voice communications between field users and dispatchers of public safety and public service agencies in Milwaukee County and Waukesha County. OASIS is: i) the handheld and car-mounted radios used by officers, firefighters, paramedics, and other mobile personnel; ii) the radio dispatch consoles operated by 9-1-1 dispatchers; iii) the radio towers and transmitters that broadcast to and from dispatchers and mobile personnel, iv) the system controllers that interconnect it all, and v) the people and policies that maintain the system's operations.

OASIS replaces the two aging and disparate systems currently operated by each county with one system that has a jointly-owned-and-operated Shared Core (the system controller that manage and route calls) and independent subsystems of radio towers and dispatch centers in each county.

The project to deploy OASIS began in 2010 when Milwaukee County's Department of Administrative Services (DAS), Information Management Services Department (IMSD) teamed with Waukesha County's Department Emergency Preparedness to commission a public-safety-radio needs assessment and a subsequent

OASIS Public Safety Radio
Governance Board 2017 Annual Report

concept/design/budget report. A joint request for proposals (RFP) was issued in April 2013 and, following a review of three competitive proposals, a contract award was made to Motorola Solutions Inc. (MSI) in December 2013 for the OASIS system.

DAS-IMSD continued their role as the project lead through December 2014. On Jan. 1st, 2015, with County Board adoption of the 2015 Budget, the new Office of Emergency Management (OEM) was created; integrating four public safety divisions to include Radio Services (formerly part of DAS-IMSD) along with three other divisions.

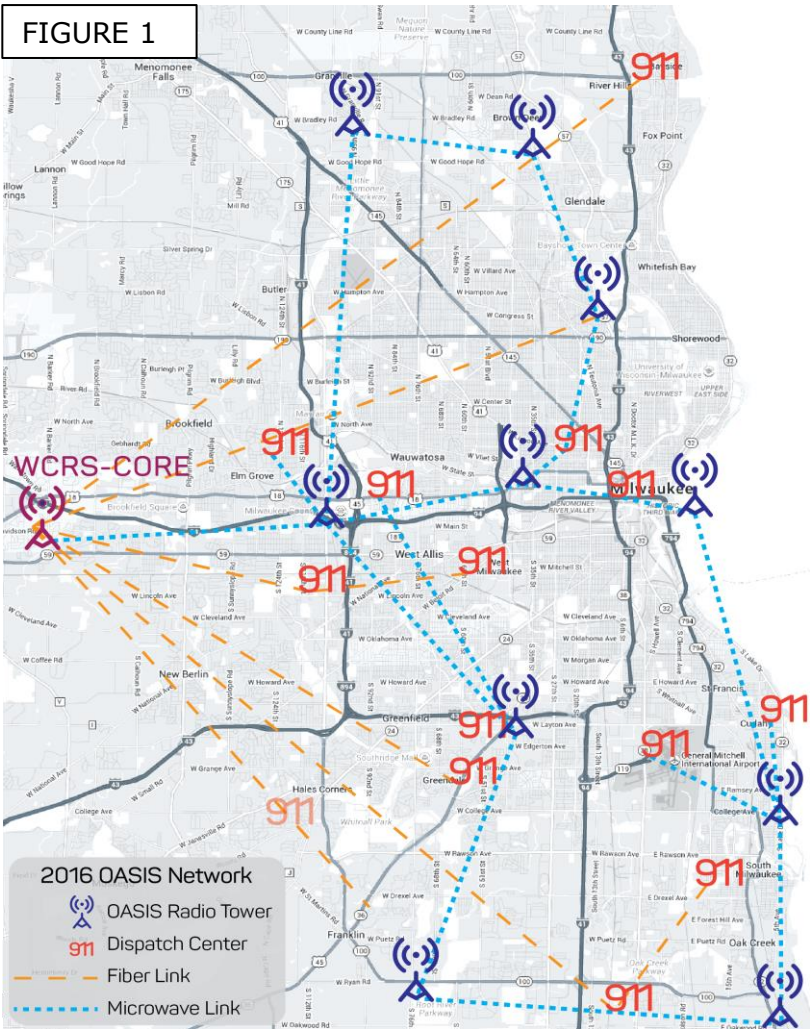
OASIS is currently deployed and operational, and the transition to its use by public safety and public service agencies will continue through 2017. Details on the achievements, current status, and plans of OASIS are contained below.

2 OASIS Operations

2.1 Design

OASIS is a P25¹ digital, simulcast², trunked³, 800MHz⁴ public safety radio system that branches both Waukesha and Milwaukee counties. The locations of the ten OASIS transmitter sites are shown in FIGURE 1.

Each county has deployed radio towers and infrastructure equipment (e.g., transmitters,



¹ P25 is the Association of Public Safety Communications Officials' (APCO) Project 25, with origins beginning in 1988 from a U.S. Congress mandate to the Federal Communications Commission (FCC) on upgrading public safety radio communications (notably from analog to digital.)

² Simulcast Radio System: a signal is transmitted over multiple radio towers simultaneously, providing wide area coverage and improved in-building coverage.

³ Trunked Radio System: users communicate on talkgroups, rather than discrete frequencies, that are dynamically assigned a talk path from a pool of available channels by a computer control system. Allows for efficient utilization of channel resources to support a greater number of users.

⁴ 800MHz is a portion of radio spectrum used in public safety radio system across the country – the frequencies used in are specifically licensed by the Federal Communications Commission to Milwaukee County and Waukesha County.

OASIS Public Safety Radio Governance Board 2017 Annual Report

dispatch consoles) within their boundaries. The link between these 'subsystems' is through the Shared Core, which is equipment that is located at Waukesha County Radio Services (WCRS)⁵ and it interconnects, controls, and manages both subsystems to create OASIS.

This design for OASIS, with its Shared Core for overall system-control and the two individual subsystems in each county, provides the following improvements over the current systems:

- Improved radio coverage, system reliability, security, and capacity (fewer busy signals).
- Cost-savings due to joint ownership of the Shared Core at WCRS.
- Replacement of costly leased telephone lines with a new site-to-site digital microwave network.
- Multiple hardware and vendor options for user radios, due to the standard signaling of APCO P25.
- Interoperability through the Shared Core connection between Milwaukee and Waukesha sub-systems:
 - Direct communications between users of varying agencies and counties; and
 - External network connections to the City of Milwaukee OpenSky and the State of Wisconsin WISCOM radio systems.

Although OASIS uses digital signaling, its over-the-air transmissions can be susceptible to reception by citizen-owned scanners for rebroadcast over the internet. For privacy of sensitive communications (like SWAT), the capability of OASIS to support encrypted communications will be utilized as the deployments of 2017 proceed as outlined below. Encryption uses a private keying algorithm to effectively scrabbles (and descramble) the digital bit-stream of specifically-selected conversations. This has been requested by law enforcement agencies including the County's Office of the Sheriff, the Milwaukee County District Attorney's Office, and several municipal police departments and it will be used for sensitive operations. To ensure that inter-department communications are not disrupted by encryption (which could occur if different encryption keys are used by different groups), the deployment of this feature has been coordinated by the OASIS governance groups as described below.



2.2 Users

OASIS (MC) serves the municipalities and departments shown in FIGURES 2A-C. In 2016, the City of Greenfield was added to this list and their use of OASIS will begin in 2017. Also, in early 2017 Hales Corners transferred its dispatch functions to Greendale and both are still OASIS users.

⁵ The Shared Core resides at the Waukesha County Radio Services (WCRS) located in Waukesha County at 2120 Davidson Rd., Waukesha, WI 53186.

OASIS Public Safety Radio Governance Board 2017 Annual Report

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Mutual aid use continues to be extended to selected non-governmental organizations that provide support to emergency-response efforts (FIGURE 2C). It will also be extended to public safety agencies in neighboring counties to allow them to communicate should they need to communicate with agencies in Milwaukee County.

OASIS's deployment includes expansion features to allow for future additional users in Milwaukee and Waukesha counties and interconnections to future radio subsystems in neighboring counties, should they wish to directly interface to the Shared Core.

FIGURE 2A

MUNICIPALITIES

Bayside (9-1-1) *
Brown Deer
Cudahy (9-1-1)
Fox Point
Franklin (9-1-1)
Glendale
Greendale (9-1-1)
Greenfield (9-1-1)
Hales Corners
North Shore Fire Dept.
Oak Creek (9-1-1)
River Hills
Shorewood
South Milwaukee (9-1-1)
St. Francis
Wauwatosa (9-1-1)
West Allis (9-1-1)
West Milwaukee (9-1-1)
Whitefish Bay

19 TOTAL
(10, 9-1-1 Dispatch Centers)

FIGURE 2B

MILWAUKEE COUNTY DEPTS

Behavioral Health
Children's Court Center
County Executive
District Attorney
Facilities Management
Highway
IMSD
House of Corrections
Medical Examiner
OEM (includes County 9-1-1)
Parks
Sheriff
Transit

13 TOTAL
1, 9-1-1 Dispatch Center
(with 1 backup Center)
2, Operations Centers

FIGURE 2C

EXTERNAL PARTNERS

MUTUAL AID USERS
American Red Cross
ARES/RACES
FireBell
Brown County HIDTA

SPONSORED USERS
North Central HIDTA (West Allis)
Mayfair Mall (Wauwatosa)
Veterans Administration (West Milwaukee)

INDEPENDENT GOVT
MADACC

8 TOTAL

* "9-1-1" indicates a Public Safety Answering Point (PSAP)

2.3 OASIS Goes Live

The OASIS system is currently operational; it is being used for dispatch operations by six of the 9-1-1 listed in FIGURES 2A-C and for field operations (radio-to-radio communications) by a pilot set of Milwaukee County Departments (Behavioral Health and Facilities Management). In the early hours of March 15, 2017, OASIS went live with the first "cutover" in which new, digital/P25-enabled dispatch consoles at the 9-1-1 centers of County OEM 9-1-1, Milwaukee County Transit System, Oak Creek⁶, Franklin, Cudahy, and Greendale⁷ were activated and connected to the Shared Core. At the same time, the Shared Core was brought on-line to interconnect those consoles to the existing Milwaukee County analog radio system and the new Milwaukee County digital OASIS radio subsystem.

⁶ Oak Creek provides dispatch service to Oak Creek and St. Francis

⁷ Greendale provides dispatch service to Greendale and Hales Corners

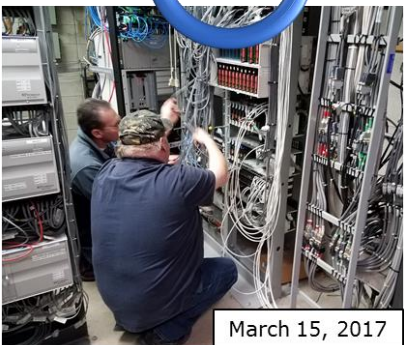
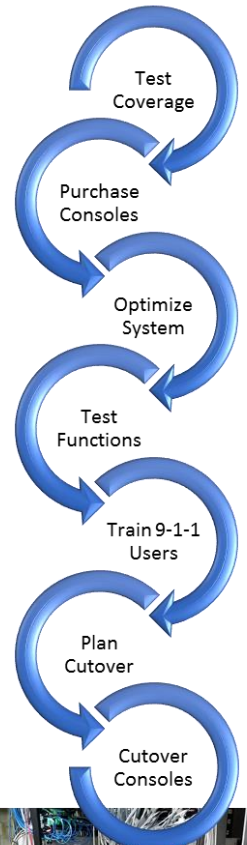
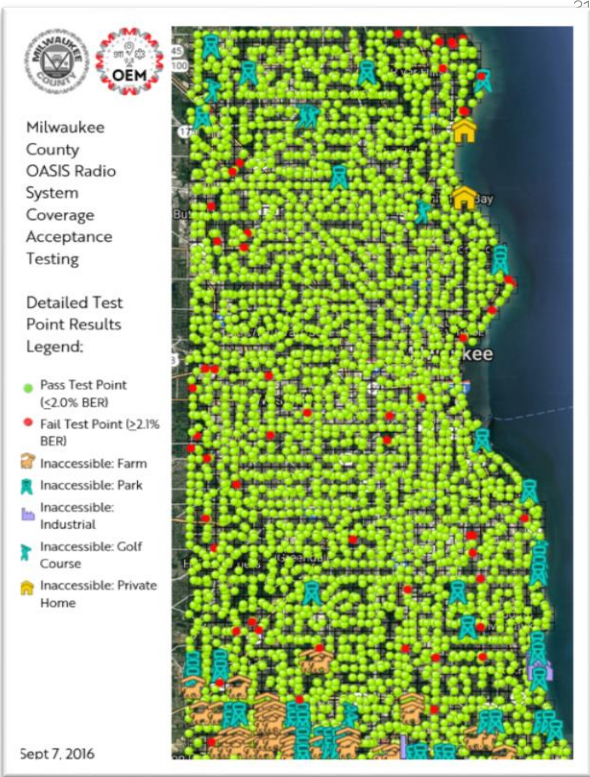
OASIS Public Safety Radio
Governance Board 2017 Annual Report

This analog-to-digital “bridging” capability of the Shared Core is provided by two sophisticated system-control computers: “SmartX,” which allows OASIS to connect to the existing Milwaukee County analog radio system; and “MGEK” which allows older dispatch consoles to also connect to both radio systems. These were intentionally included in OASIS’ design to support a graceful transition period in which old and new dispatch consoles and field radios can intercommunicate until all 9-1-1 centers and field-user groups are replaced or reprogrammed to operate on OASIS.

2.4 OASIS Project Milestones

The cutover of the first 9-1-1 radio consoles in March 2017 marked the completion of a number of accomplishments to include:

- June 2016: Over a period of five days, two three-person teams canvassed 2,937 grids in the County to successfully demonstrate that all 10 towers provide the required and contracted level of signal Countywide.
- June to October 2016: Municipalities purchased their 9-1-1 radio console equipment. This followed an extensive renegotiation effort in which original cost quotes were reduced to levels specified in Milwaukee County’s contract with Motorola. The cost reduction for all municipal consoles totaled \$485,815⁸, however, the renegotiations delayed the deployment of the equipment by approximately four months.



- August to November 2016: Optimization was completed of the microwave-frequency links that interconnect the radio sites to each other and to the Shared Core.
- November 2016 to February 2017: Municipal consoles were installed and the Shared Core and Milwaukee County subsystem went through final optimization and configuration.
- January to February 2017: Nearly 150 individual test plans were executed on the Shared Core and Milwaukee County subsystem (covering radio system features, console features, system control/management features, microwave performance, and system failure resiliency) to successfully demonstrate that OASIS performs at the level of functionality and reliability required by the County’s contract with Motorola.

⁸ MCC7500 dispatch console cost reductions were as follows: For Cudahy: \$70,287. For Franklin: \$95,159. For Greendale: \$65,986. For Oak Creek: \$108,372. For South Milwaukee: \$60,791. For Wauwatosa: \$86,319.

OASIS Public Safety Radio Governance Board 2017 Annual Report

- *February 2017*, training was delivered to more than 25 County and municipal operators of the new 9-1-1 dispatch console equipment.
- *January 2017 to March 15, 2017*: A comprehensive cutover plan was developed with input from all involved user groups, ensuring each: i) had a backup system⁹ they could use for the two-hour period when the radio systems were off-line, ii) knew how to test their new equipment, and iii) had a process to report any trouble issues during and after cutover.

2.5 The Way Ahead

Additional cutovers are yet to occur including transition of the remaining 9-1-1 centers to new dispatch console equipment and conversion of the user radios of County and municipal departments (see FIGURE 3).

- *Cutover of Remaining 9-1-1 Centers*: Converting equipment to new, digital-capable dispatch consoles and interconnecting it to the Shared Core at General Mitchell International Airport, South Milwaukee, Wauwatosa, Bayside, West Allis, West Milwaukee, and Greenfield (listed in order of planned schedule).
- *Interconnecting OASIS to WISCOM*: Working with radio-services groups from the State of Wisconsin to configure a system-to-system interconnection, known as an Inter-RF-Subsystem Interface (ISSI), to allow direct flow of voice-radio conversations between the two systems.
- *Transitioning Milwaukee County Subsystem to Its One-Year Warranty Period*: Initiating Motorola support services to monitor and maintain the system. (Milwaukee County currently purchases many of these same monitor/support services for its existing analog system and expects to purchase them for OASIS once the one-year warranty period expires.)
- *Transitioning User Group Radios*: Installing new software and reprogramming the handheld and vehicle-mounted radios to operate on Milwaukee County's OASIS subsystem. The analog-to-digital 'bridging' capability of the Shared Core allows this transition to occur at a schedule that is convenient to the various user groups and that can accommodate the multiple months that will be required to transition large departments (Sheriff and Transit each operate over 700 radios). The long duration for transitioning all user radios is due to the complexity of the process as well as its need for accuracy in the settings programmed into radios and precision in inventorying and data-keeping. (The entire process for transitioning a user radio is shown in Appendix D, "Radio Provisioning Process".)
- *Interconnecting OASIS to OpenSky*: Working with City of Milwaukee radio-services groups to configure an ISSI interconnection between the two systems. To align with other public-safety-radio initiatives of the City of Milwaukee, this will occur after OASIS's interconnection to WISCOM.
- *Decommissioning the Analog System*: As user radios are transitioned from the existing analog system to OASIS, so will the 800MHz radio channels be transferred from use on analog to OASIS. Once all



Programming Radios

⁹ The backup systems included the "8TAC" radio sites operated by the City of Milwaukee and a decommissioned, analog radio system owned by the City of Greenfield and maintained for just such "backup" purposes. The availability of these two systems was critical to the cutover of March 15, 2017.

OASIS Public Safety Radio Governance Board 2017 Annual Report

user radios are transitioned, the existing analog radio system will be turned off and its equipment will be removed from radio sites for storage and disposal.

- *Close Out the Project:* Following the successful completion of all tasks and punch-list items, and all project payments have been made to Motorola and Baycom, the local radio installation-and-service shop.

Task	Figure 3	2 nd Quarter 2017	3 rd Quarter 2017	4 th Quarter 2017	1 st Quarter 2018
Cutover Remaining 9-1-1 Centers					
Complete Interconnection to State of WI's WISCOM System					
Begin 'Warranty Period' of Milwaukee County OASIS Subsystem					
Transition Municipal User Depts' Radios					
Transition Milwaukee County Sheriff's Radios					
Transition Milwaukee County Transit's Radios					
Transition Other County Dept's Radios					
Decommission Existing Analog Radio System					
Complete Interconnection to City of Milwaukee's OpenSky System					
Close-Out Deployment Project and Contracts with Vendors					

3 OASIS Governance

3.1 The Shared Core MOU

The Shared Core between Milwaukee and Waukesha Counties is the foundation of the robust interoperability improvements granted through this project. Shared Core ownership is between Milwaukee and Waukesha counties, each contributing 50 percent to the capital cost. A Shared Core Memorandum of Understanding (MOU) between the counties has been negotiated to express roles of ownership, operation, and maintenance. This MOU states the details by which Waukesha County Radio Services (WCRS) shall provide daily-upkeep tasks as well as the processes that both counties shall undertake to make any significant modifications to the Shared Core, to include expansion or upgrade. It is expected to obtain signatory approvals by July 2017.

Technical support above and beyond WCRS capabilities for the Shared Core and expertise on the Milwaukee County subsystem will

Shared Core MOU

Defines the rights and responsibilities of and for daily operations, software updates, major upgrades and expansion.

Maintenance Agreement

System security updates, platform upgrades, off-site system performance monitoring and component repairs, on-site system support, telephone support.

OASIS Public Safety Radio Governance Board 2017 Annual Report

be provided by Motorola, initially as part of the one-year warranty period and then as procured by Milwaukee County through an annual Maintenance Agreement.

3.2 The Municipal Use IGA

The partnering document within the County of Milwaukee is the OASIS Intergovernmental Agreement (IGA) which defines responsibilities of the County as a system operator and those responsibilities of the user agencies as subscribers. The level of service is dictated as well as the graduated schedule for usage fees paid by subscriber agencies.

IGA

For user groups from municipalities - Sets performance standard for OASIS and schedule for usage fees and capital improvement fund.

The municipal agency usage fees, shown in FIGURE 4, are combined with Milwaukee County contributions to fully fund the operations and maintenance of OASIS.

The IGA also sets a schedule for municipal payments to a Capital Improvement Fund that is to be kept in "a segregated fund that is under control" of the Governance Board "for the purpose of the betterment or replacement of" OASIS.¹⁰

OEM also serves the leading role as the County department responsible for the daily operations and maintenance of the OASIS subsystem. OEM Radio Services works in tandem with the OASIS Governance Board, abiding by the charter of the Board.¹¹

FIGURE 4: Usage Fees & Capital Improvement Fund			
Year	Usage Fee	Cap. Imp. Fee	Total Fee
Municipal \$ per radio per month			
2015	\$2	\$0	\$2
2016	\$5	\$0	\$5
2017	\$9	\$0	\$9
2018	\$12	\$2	\$14
2019	\$14	\$3	\$17
2020	\$14*	\$4	\$18*
2021		\$5	\$19*
2022		\$5**	\$19* **
2022+		\$5**	\$19 * **
* may be adjusted per CPI			

3.3 The Governance Board & Tech/Ops

The OASIS Governance Board, created through the implementation of the IGA, is comprised of seven members representing municipal agencies and Milwaukee County. The duties of the Governance Board are outlined below. Also shown are the accomplishments for since last year, which build on the 2016 successes of negotiating zero-cost system upgrades (SUAll/SUS) for municipal dispatchers (saving over \$715,000 over a ten-year period) and successfully petitioning for an extension of subscriber radio warranty, with coverage through July 1, 2017, or 18 months after receipt of shipment.

¹⁰ IGA, Paragraph 4.1, Page 1.

¹¹ IGA, Exhibit F, dictates OASIS Governance Board, Sub-Committee, and Special Committee membership and responsibilities.

OASIS Public Safety Radio
Governance Board 2017 Annual Report

DUTIES of the OASIS Governance Board

1. Sole control of the segregated Capital Improvement Fund (IGA 4.1, 4.4).
 - Allocation of these monies to procure contracted services to identify system requirements for P25 system replacement; commencing no later than 2028.
2. Annual report to include recommendation on OEM OASIS operating budget to the County Executive and a 5-year Capital Improvement Plan.
3. Approval of new users, non-public safety users and associated user fees.
4. Creation of the Tech & Ops Committees and implementation of recommended standards.
5. Prohibited actions include:
 - Implementation of OASIS,
 - Policies or standards which expressly contradict the Waukesha County MOU or the IGA,
 - Negotiate with contractor/vendors regarding purchase, and
 - Levy taxes, incur debt, issue bonds and/or sue.

2016-2017 ACHIEVEMENTS of the OASIS Governance Board

1. Published 2016 annual report
2. Renegotiated municipal 9-1-1 dispatch console purchases, lowering the total cost of all purchases by \$485,815.
3. Negotiated with Motorola the free replacement of aging handheld radios that were initially stated as capable of P25/OASIS operations but later found to be incapable of being transitioned to OASIS. This will result in approximately \$140,000 in new handheld radio equipment being provided at no cost by Motorola to municipal user agencies.
4. Approved the core set of parameters that will be used to program user radios.
5. Approved Brown County division of North Central HIDTA as Mutual Aid users

2017 OASIS Governance Board Directors

Village Manager Andy Pederson, Village of Bayside
Director Christine Westrich, County Office of Emergency Management
Chief Eric Cera, Hales Corners Police Department
Hon. Mayor Erik Brooks, City of South Milwaukee
Chief Robert Ugaste, Wauwatosa Fire Department
Director Steve Kreklow, County Central Budget Office
Deputy Director Kathleen David, General Mitchell International Airport

Supporting the OASIS Governance Board are the standing Technical and Operational Committees, referred together as "Tech/Ops". The two sub-committees have joined to create one standing body of experts which have been very productive in the past year.

The meetings of the Board and Tech/Ops are open to the public and non-voting members regularly attend and

OASIS Public Safety Radio Governance Board 2017 Annual Report

2017 OASIS Technical Committee

- Batt Chief Jim Mayer, North Shore Fire Dept. (Chair)
- Rich Foscatto, Bayside 9-1-1 Dispatch
- Lt. Andy Jensen, St. Francis Fire Dept.
- Greg Reske, MC GMIA
- Officer Jim Turk, Whitefish Bay Police Dept.
- Erik Viel, MC OEM Radio Dir
- Capt. Sean Licht, Greenfield Police Dept.*

2017 OASIS Operational Committee

- Asst. Chief J. Scharfenberg, West Allis Fire Dept. (Chair)
- Michelle Dahlen, Wauwatosa IT/9-1-1 (Vice Chair)
- Erik Viel, MC OEM Radio Dir (Secretary)
- Lt. Chris Botsch, West Allis Police Dept.
- Capt. Wes Guajardo, Hales Corners Fire Dept.
- Julie Schneider, Milwaukee County Transit Services
- Jason Bauknecht, Oak Creek 9-1-1 Dispatch *

* Pending approval by Governance Board

2017 OASIS Tech/Ops Non-Voting

- Ron Mirka, Motorola Solutions Inc.
- Brian Jansen, ARES/RACES
- Paulina De Haan, City of Milwaukee
- Chris Petterson, WCRS
- Josh Ripp, State of Wisconsin/WISCOM
- Steve Surwillo, CDX Wireless
- Debbie Wilichowski, Milwaukee Fire Dept.

contribute.¹² It was the Tech/Ops sub-committees that provided critical input to the console cutover plan that was successfully executed on March 15, 2017. In 2016 and the first months of 2017, Tech/Ops also:

- Provided hands-on support of, and witness to, the system's coverage and functional testing;
 - Developed a draft of a "system fallback" plan that defines how user groups can continue radio operations in the case of system outage;
 - Developed the core set of parameters that will be used to program user radios (later approved by the Governance Board);
 - Developed and approved a plan for enabling encryption for selected communications (mainly sensitive law-enforcement operations such as SWAT) on OASIS in a way that supports inter-agency use;
 - Developed a standard convention for the 'aliases' that are assigned to user radios¹³; and
 - Contributed significantly to the development of the cutover plan that was executed for the console cutover of March 15, 2017.

OEM actively participates in the Governance Board and Tech/Ops to communicate system readiness, user agency deliverables, and for collaborative planning and execution of the migration to OASIS digital radio.

¹² In accordance with Wis. s.s. Chapter 19, Open Records and Open Meetings Provisions.

¹³ An alias is a text name assigned to a user radio and it, instead of a numeric radio identifier, is displayed at dispatch consoles when that radio transmits. Aliases allow dispatcher to clearly know who is talking and an example of an alias is "NSFD BC Mayer".

**OASIS Public Safety Radio
Governance Board 2017 Annual Report**

4 OASIS Finances

4.1 Capital Build-Out Budget

The OASIS subsystem build-out project is known as WO614 in Milwaukee County government. WO614 is supported through County Board action in the adoption of legislative files that ensure the implementation and funding of the OASIS subsystem and the Shared Core. The WO614 project was originally appropriated as a project of \$17,490,699, to be expended as bonds and cash, from 2010 through 2018. An additional \$308,692 was added to the project budget through a cash fund transfer in 2016, raising the total project budget to \$17,799,391¹⁴. This budget amount funds the following (See APPENDIX A for further details):

Item(s) Funded	Detail
50% of the Shared Core equipment	\$402,178 for system-control computers located at WCRS (the same amount was contributed by Waukesha County)
The entire subsystem of Milwaukee County to include site construction/remediation, radio site equipment and microwave links	\$8,965,707 for 10 radio sites including 3 completely new towers and 3 significant tower upgrades as well as all radio-site transmitter equipment and 17 microwave links ¹⁵
Dispatch consoles for MC operations to include 9-1-1, EMS, and Transit (MCTS)	\$645,745 for 22 total consoles (13 at 9-1-1/EMS, 5 at MCTS, and 4 at backup 9-1-1)
User radios for Milwaukee County (MC) departments	\$4,623,373 for a total of 2,090 handheld, vehicle-mounted and desktop radios \$1,205,959 for radio accessories and radio programming/installation services \$397,203 for upgrades to radios to provide encrypted communications
Professional services	\$1,257,742 for consulting and contractors to include initial needs-analysis studies, procurement assistance, on-going project-management, and implementation support
Interest on bonds	\$294,645 ¹⁶

¹⁴ An additional \$50,000 cash fund transfer has been approved in early 2017, to be specifically applied to improving radio coverage in County buildings, however, that transfer has not occurred as of yet.

¹⁵ Also includes \$33,281 for charges internal to Milwaukee County including for assistance from Facilities Management and construction permits

¹⁶ Included in this amount is an estimate of \$10,00 for interest in bonds to be paid in 2017

OASIS Public Safety Radio Governance Board 2017 Annual Report

<u>Current Project Budget</u>		Encumbered, or contractually obligated.
PAID-OUT	\$13,413,463.87	
ENCUMBERED	\$3,515,603.28	
PLANNED SPEND	\$870,323.85	MC radio migration, building amplifiers, tower site clean-up, and future expansion.
TOTAL	\$17,799,391.00	

4.2 System Usage, Usage Fees, and Operational Costs

APPENDIX B provides further detail on the active user radio count for each municipality. The number of municipal radios active on OASIS dictates the total fee to that municipality.

The total municipal IGA radio count is 2,227 active user radios, while the Milwaukee County departments radio count totals 2,413 active user radios.

Of note, APPENDIX B also provides the number of push-to-talks (PTTs) for the period of May 10, 2016 to May 10, 2017. PTTs are an indication of true system usage, or voice traffic, generated by each user group on the existing system.

Lastly, APPENDIX B projects the total fee revenue for 2018 to be \$320,688 from municipal users (based on 2016's actual active-radio count) with the balance of funds required to operate the system to be contributed by Milwaukee County.

Previous Milwaukee County OASIS budget information was based upon a "crosscharge" interdepartmental billing system that was used by the County for cost accounting purposes. Under that crosscharge system, funds (including property tax levy) for radio-related services were budgeted in user departments (e.g., the Sheriff's Office), however, the costs for the radio system were budgeted in the Office of Emergency Management. At the end of each year, journal entries were made in the County's accounting system to move budgeted funds from user departments to the Office of Emergency Management to offset expenses that were incurred.

In order to simplify County processes and to make the use of property tax levy funds more transparent to County policy makers and tax payers, the County will no longer crosscharge for services provided to departments that are primarily property tax levy funded. As a result, the format of the 2018 budget for Milwaukee County radio services included in this Report is changing.

For the first time, OEM's Radio Services budget will include a line for Direct Property Tax Levy contribution. This represents the funding that, under the old method, would have previously been budgeted in property tax levy supported user-department budgets and moved to OEM via crosscharges. This change in the way the budget is presented does not impact the amount of resources budgeted by the County to support OASIS. In the meantime, OEM will continue cross charge County departments that rely primarily of sources of funds

OASIS Public Safety Radio Governance Board 2017 Annual Report

other than property tax (e.g., General Mitchell International Airport). Overall Milwaukee County is maintaining the same level of support for Radio Services as has been provided in 2017 and prior years.

The usage fee revenue collected from municipalities and the funds contributed by the County is applied evenly to all categories of OASIS's operational cost. The detailed operating budget for OEM Radio Services Division is provided in Appendix C, including staff, radio site leases held on privately-owned property, utility costs for the sites, Shared Core hosting services to WCRS, on-going technical support from the contracted vendor.

OEM's operation of OASIS for these contributing user groups is to be measured by the following Key Performance Indicators (FIGURE 5):

FIGURE 5 – OASIS PERFORMANCE KEY PERFORMANCE INDICATORS								
	Goals and Measures	2015 Actual	2016 Actual	2017 Target	2017 YTD Actual	2017 % to Goal	2018 Target	2019 Target
Goal Category: System Availability	System Reliability of 99.999% ^(a)	5 min	0 min	<5.26 min	0 min	100%	<5.26 min	<5.26 min
	# Service Reductions		1	10	2	100%	4	4
	Call-Request Buses	0.27/1,500	0.29/1,500	1.00/1,500	0.89/1,500	100%	1.00/1,500	1.00/1,500
Goal Category: Interoperability	Connected to State/WISCOM & City/OpenSky		0.2	1/2	0/2	0%	2/2	
	# of Trained Comms Specialists ^(b)		2/15	15/15	2/15	13%		
	% Comms Plans Completed ^(c)		n/a	90%	100%	100%	90%	90%

^(a) A reliability value of 99.999% equates to system downtime of no more than 5.26 minutes per 365 days

^(b) A trained communications specialist is one that has completed "Communications Leader" (a/k/a, "ComL") credentialing

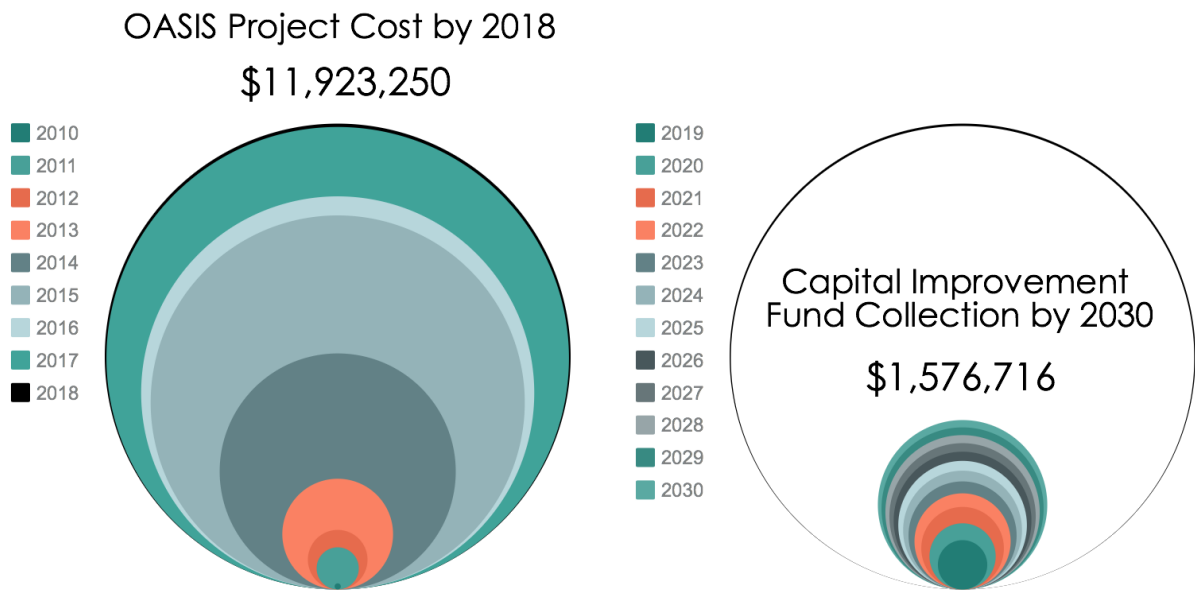
^(c) Completion of a Comms Plan is evidenced by approval of an ICS-205 form which designates which systems and channels are to be used by whom and for what purpose during an event that requires interoperability

4.3 Capital Improvement Fund

Capital Improvement Fund fees will not be collected in 2017, rather 2018 is the first year with a projected amount of \$50,136. At this time, there are no recommended improvements or scheduled expenses related to the Fund. This coming year Milwaukee County will finalize the system deployment and cutovers, upon which the Governance Board will develop a five-year capital improvement plan to be expected in 2018.

OASIS Public Safety Radio
Governance Board 2017 Annual Report

1 The projected Capital Improvement Fund balance after 12 years, in the year 2030, is \$1,576,716¹⁷. This amount
2 is to be used towards the betterment and/or replacement of OASIS as dictated by the OASIS Governance
3 Board. Comparatively, this current system cost is \$11,923,250 which is the total project cost including 50% of
4 the Shared Core (\$17,799,391, noted earlier) but excluding the costs of Milwaukee County radios and dispatch
5 consoles. This difference between the cost to deploy the Milwaukee County OASIS system and the amount
6 collected in the Capital Improvement Fund by 2030 is shown in the following FIGURE 6. It is not known what
7 technology will be available in 2030 to replace OASIS nor the anticipated cost to deploy that technology,
8 however, FIGURE 6 shows the disparity between the costs to implement OASIS and the amounts collected
9 in the Capital Improvement Fund. The Governance Board is keenly aware of this disparity and will continue
10 to monitor the Capital Improvement Fund’s amount and plan for its most effective use.



¹⁷ Assumes consistency of radio counts at 2016 levels

OASIS Public Safety Radio Governance Board 2017 Annual Report

APPENDIX A: OASIS Project/Capital Expenses & Budget

Milwaukee County OASIS Project Capital Expenses (Project WO614)										
Category	TOTAL	2010	2011	2012	2013	2014	2015	2016	2017	2018
Infrastructure	\$9,198,899.06	\$0.00	\$0.00	\$0.00	\$459,944.95	\$2,115,746.78	\$4,139,504.58	\$0.00	\$2,483,702.75	\$0.00
Contract for Service #1332 with Motorola										
Shared Core	\$402,177.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$86,468.17	\$207,121.43	\$108,587.93	\$0.00
50% of total Shared Core (as shared with Waukesha County)										
Subscriber Radios	\$5,230,396.03	\$0.00	\$0.00	\$0.00	\$1,417,011.55	\$2,600,602.88	\$136,266.25	\$147,531.70	\$883,653.27	\$45,330.38
Mobiles, Portables for County Departments										
Contingency	\$1,382,249.79	\$0.00	\$0.00	\$0.00	\$0.00	\$43,635.40	\$343,799.49	\$284,420.00	\$569,662.96	\$140,731.94
Change Orders with Motorola and Other Unplanned Expenses										
Internal Charges	\$33,280.71	\$0.00	\$0.00	\$0.00	\$0.00	\$19,901.76	\$13,124.79	\$254.16	\$0.00	\$0.00
Other Milwaukee County Departments (A&E, etc)										
Professional Services	\$1,257,742.82	\$0.00	\$0.00	\$20,540.80	\$24,759.15	\$323,480.94	\$284,860.88	\$310,675.58	\$263,177.61	\$30,247.86
Consultants and External Contractors										
Interest	\$294,645.06	\$2,041.00	\$95,634.67	\$76,520.00	\$26,671.39	\$32,766.00	\$48,692.00	\$2,320.00	\$10,000.00	\$0.00
Debt Service on WO614 Funding										
TOTALS	\$17,799,391.00	\$2,041.00	\$95,634.67	\$97,060.80	\$1,928,387.04	\$5,136,133.76	\$5,052,716.16	\$952,322.87	\$4,318,784.52	\$216,310.18
Milwaukee County OASIS Project Budget										
Category	TOTAL	2010	2011	2012	2013	2014	2015	2016	2017	2018
Appropriation	\$14,297,634.00	\$1,761,000.00	\$0.00	\$0.00	\$1,842,168.00	\$7,126,100.00	\$2,009,183.00	\$1,559,183.00	\$0.00	\$0.00
Funds Transfer	\$3,501,757.00	\$193,065.00				\$3,000,000.00	\$308,692.00			
TOTALS	\$17,799,391.00	\$1,954,065.00	\$0.00	\$0.00	\$1,842,168.00	\$10,126,100.00	\$2,317,875.00	\$1,559,183.00	\$0.00	\$0.00
Milwaukee County OASIS Project Account Balance (by Year)										
	NET	2010	2011	2012	2013	2014	2015	2016	2017	2018
Avail Balance	\$0.00	\$1,952,024.00	\$1,856,389.33	\$1,759,328.53	\$1,673,109.49	\$6,663,075.73	\$3,928,234.57	\$4,535,094.70	\$216,310.18	\$0.00

OASIS Public Safety Radio
Governance Board 2017 Annual Report

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APPENDIX B: OASIS Usage Fee and Capital Improvement Projections (2017 – 2022)

OASIS Revenue Projections																		
Revenues for 2017 & beyond are based on 2016 actual radio counts																		
Municipality	5/10/2016 - 5/10/2017 PTT	2016 Actual Radio Count	2016		2017		2018		2019		2020		2021		2022			
			\$ 5.00	-	\$ 9.00	-	\$ 12.00	2.00	14.00	3.00	14.00	4.00	14.00	5.00	14.00	5.00		
			User Fee	Capital Fund	User Fee	Capital Fund	User Fee	Capital Fund	User Fee	Capital Fund	User Fee	Capital Fund	User Fee	Capital Fund	User Fee	Capital Fund	User Fee	Capital Fund
Bayside*	1,191,759	40	\$ 2,400.00	\$ -	\$ 4,320.00	\$ -	\$ 5,760.00	\$ 960.00	\$ 6,720.00	\$ 1,440.00	\$ 6,720.00	\$ 1,920.00	\$ 6,720.00	\$ 2,400.00	\$ 6,720.00	\$ 2,400.00	\$ 6,720.00	\$ 2,400.00
Brown Deer		57	\$ 3,420.00	\$ -	\$ 6,156.00	\$ -	\$ 8,208.00	\$ 1,368.00	\$ 9,576.00	\$ 2,052.00	\$ 9,576.00	\$ 2,736.00	\$ 9,576.00	\$ 3,420.00	\$ 9,576.00	\$ 3,420.00	\$ 9,576.00	\$ 3,420.00
Cudahy	481,396	103	\$ 6,180.00	\$ -	\$ 11,124.00	\$ -	\$ 14,832.00	\$ 2,472.00	\$ 17,304.00	\$ 3,708.00	\$ 17,304.00	\$ 4,944.00	\$ 17,304.00	\$ 6,180.00	\$ 17,304.00	\$ 6,180.00	\$ 17,304.00	\$ 6,180.00
Fox Point		21	\$ 1,260.00	\$ -	\$ 2,268.00	\$ -	\$ 3,024.00	\$ 504.00	\$ 3,528.00	\$ 756.00	\$ 3,528.00	\$ 1,008.00	\$ 3,528.00	\$ 1,260.00	\$ 3,528.00	\$ 1,260.00	\$ 3,528.00	\$ 1,260.00
Franklin	841,065	165	\$ 9,900.00	\$ -	\$ 17,820.00	\$ -	\$ 23,760.00	\$ 3,960.00	\$ 27,720.00	\$ 5,940.00	\$ 27,720.00	\$ 7,920.00	\$ 27,720.00	\$ 9,900.00	\$ 27,720.00	\$ 9,900.00	\$ 27,720.00	\$ 9,900.00
Glendale		46	\$ 2,760.00	\$ -	\$ 4,968.00	\$ -	\$ 6,624.00	\$ 1,104.00	\$ 7,728.00	\$ 1,656.00	\$ 7,728.00	\$ 2,208.00	\$ 7,728.00	\$ 2,760.00	\$ 7,728.00	\$ 2,760.00	\$ 7,728.00	\$ 2,760.00
Greendale	435,812	115	\$ 6,900.00	\$ -	\$ 12,420.00	\$ -	\$ 16,560.00	\$ 2,760.00	\$ 19,320.00	\$ 4,140.00	\$ 19,320.00	\$ 5,520.00	\$ 19,320.00	\$ 6,900.00	\$ 19,320.00	\$ 6,900.00	\$ 19,320.00	\$ 6,900.00
Greenfield		224	\$ 13,440.00	\$ -	\$ 24,192.00	\$ -	\$ 32,256.00	\$ 5,376.00	\$ 37,632.00	\$ 8,064.00	\$ 37,632.00	\$ 10,752.00	\$ 37,632.00	\$ 13,440.00	\$ 37,632.00	\$ 13,440.00	\$ 37,632.00	\$ 13,440.00
Hales Corners	210,773	86	\$ 5,160.00	\$ -	\$ 9,288.00	\$ -	\$ 12,384.00	\$ 2,064.00	\$ 14,448.00	\$ 3,096.00	\$ 14,448.00	\$ 4,128.00	\$ 14,448.00	\$ 5,160.00	\$ 14,448.00	\$ 5,160.00	\$ 14,448.00	\$ 5,160.00
Northshore FD	183,288	120	\$ 7,200.00	\$ -	\$ 12,960.00	\$ -	\$ 17,280.00	\$ 2,880.00	\$ 20,160.00	\$ 4,320.00	\$ 20,160.00	\$ 5,760.00	\$ 20,160.00	\$ 7,200.00	\$ 20,160.00	\$ 7,200.00	\$ 20,160.00	\$ 7,200.00
Oak Creek	952,459	145	\$ 8,700.00	\$ -	\$ 15,660.00	\$ -	\$ 20,880.00	\$ 3,480.00	\$ 24,360.00	\$ 5,220.00	\$ 24,360.00	\$ 6,960.00	\$ 24,360.00	\$ 8,700.00	\$ 24,360.00	\$ 8,700.00	\$ 24,360.00	\$ 8,700.00
River Hills		18	\$ 1,080.00	\$ -	\$ 1,944.00	\$ -	\$ 2,592.00	\$ 432.00	\$ 3,024.00	\$ 648.00	\$ 3,024.00	\$ 864.00	\$ 3,024.00	\$ 1,080.00	\$ 3,024.00	\$ 1,080.00	\$ 3,024.00	\$ 1,080.00
Shorewood		41	\$ 2,460.00	\$ -	\$ 4,428.00	\$ -	\$ 5,904.00	\$ 984.00	\$ 6,888.00	\$ 1,476.00	\$ 6,888.00	\$ 1,968.00	\$ 6,888.00	\$ 2,460.00	\$ 6,888.00	\$ 2,460.00	\$ 6,888.00	\$ 2,460.00
South Milwaukee	411,729	90	\$ 5,400.00	\$ -	\$ 9,720.00	\$ -	\$ 12,960.00	\$ 2,160.00	\$ 15,120.00	\$ 3,240.00	\$ 15,120.00	\$ 4,320.00	\$ 15,120.00	\$ 5,400.00	\$ 15,120.00	\$ 5,400.00	\$ 15,120.00	\$ 5,400.00
St. Francis	314,516	69	\$ 4,140.00	\$ -	\$ 7,452.00	\$ -	\$ 9,936.00	\$ 1,656.00	\$ 11,592.00	\$ 2,484.00	\$ 11,592.00	\$ 3,312.00	\$ 11,592.00	\$ 4,140.00	\$ 11,592.00	\$ 4,140.00	\$ 11,592.00	\$ 4,140.00
Wauwatosa	868,110	225	\$ 13,500.00	\$ -	\$ 24,300.00	\$ -	\$ 32,400.00	\$ 5,400.00	\$ 37,800.00	\$ 8,100.00	\$ 37,800.00	\$ 10,800.00	\$ 37,800.00	\$ 13,500.00	\$ 37,800.00	\$ 13,500.00	\$ 37,800.00	\$ 13,500.00
West Allis	1,755,389	421	\$ 25,260.00	\$ -	\$ 45,468.00	\$ -	\$ 60,624.00	\$ 10,104.00	\$ 70,728.00	\$ 15,156.00	\$ 70,728.00	\$ 20,208.00	\$ 70,728.00	\$ 25,260.00	\$ 70,728.00	\$ 25,260.00	\$ 70,728.00	\$ 25,260.00
Whitefish Bay		47	\$ 2,820.00	\$ -	\$ 5,076.00	\$ -	\$ 6,768.00	\$ 1,128.00	\$ 7,896.00	\$ 1,692.00	\$ 7,896.00	\$ 2,256.00	\$ 7,896.00	\$ 2,820.00	\$ 7,896.00	\$ 2,820.00	\$ 7,896.00	\$ 2,820.00
West Milwaukee	256,350	9	\$ 540.00	\$ -	\$ 972.00	\$ -	\$ 1,296.00	\$ 216.00	\$ 1,512.00	\$ 324.00	\$ 1,512.00	\$ 432.00	\$ 1,512.00	\$ 540.00	\$ 1,512.00	\$ 540.00	\$ 1,512.00	\$ 540.00
MADACC	52,272	19	\$ 1,140.00	\$ -	\$ 2,052.00	\$ -	\$ 2,736.00	\$ 456.00	\$ 3,192.00	\$ 684.00	\$ 3,192.00	\$ 912.00	\$ 3,192.00	\$ 1,140.00	\$ 3,192.00	\$ 1,140.00	\$ 3,192.00	\$ 1,140.00
HIDTA	129,073	72	\$ 4,320.00	\$ -	\$ 7,776.00	\$ -	\$ 10,368.00	\$ 1,728.00	\$ 12,096.00	\$ 2,592.00	\$ 12,096.00	\$ 3,456.00	\$ 12,096.00	\$ 4,320.00	\$ 12,096.00	\$ 4,320.00	\$ 12,096.00	\$ 4,320.00
VA Police	309	26	\$ 1,560.00	\$ -	\$ 2,808.00	\$ -	\$ 3,744.00	\$ 624.00	\$ 4,368.00	\$ 936.00	\$ 4,368.00	\$ 1,248.00	\$ 4,368.00	\$ 1,560.00	\$ 4,368.00	\$ 1,560.00	\$ 4,368.00	\$ 1,560.00
Mayfair	867,793	68	\$ 4,080.00	\$ -	\$ 7,344.00	\$ -	\$ 9,792.00	\$ 1,632.00	\$ 11,424.00	\$ 2,448.00	\$ 11,424.00	\$ 3,264.00	\$ 11,424.00	\$ 4,080.00	\$ 11,424.00	\$ 4,080.00	\$ 11,424.00	\$ 4,080.00
Radio Count			2016		2017		2018		2019		2020		2021		2022			
IGA Total ***	8,952,093	2,227	\$ 133,620.00	\$ -	\$ 240,516.00	\$ -	\$ 320,688.00	\$ 53,448.00	\$ 374,136.00	\$ 80,172.00	\$ 374,136.00	\$ 106,896.00	\$ 374,136.00	\$ 133,620.00	\$ 374,136.00	\$ 133,620.00	\$ 374,136.00	\$ 133,620.00
			Fund Balance		\$ 133,620.00		\$ 240,516.00		\$ 374,136.00		\$ 481,032.00		\$ 614,128.00		\$ 747,224.00		\$ 880,320.00	
			\$ 55.87	\$ -	\$ 55.87	\$ -	\$ 55.87	\$ -	\$ 55.87	\$ -	\$ 55.87	\$ -	\$ 55.87	\$ -	\$ 55.87	\$ -	\$ 55.87	\$ -
MC Total	7,638,175**	2,413	\$ 1,581,570.00	\$ -	\$ 1,581,570.00	\$ -	\$ 1,241,389.11	\$ -	\$ 1,241,389.11	\$ -	\$ 1,241,389.11	\$ -	\$ 1,241,389.11	\$ -	\$ 1,241,389.11	\$ -	\$ 1,241,389.11	\$ -
User Fees Total	16,490,268	4,640	\$ 1,715,190.00	\$ -	\$ 1,822,086.00	\$ -	\$ 1,562,077.11	\$ 53,448.00	\$ 1,615,525.11	\$ 133,620.00	\$ 1,615,525.11	\$ 240,516.00	\$ 1,615,525.11	\$ 374,136.00	\$ 1,615,525.11	\$ 374,136.00	\$ 1,615,525.11	\$ 507,756.00
2030 Capital Fund Balance*																	\$ 1,576,716.00	

* Included in Bayside's count of PTT's are Bayside, Brown Deer, Fox Point, Glendale, River Hills, Shorewood, and Whitefish Bay
** Included in MC Total are: MCSO 2,689,528. CJF 751,802. MCTS 1,021,385. HOC 1,198,393. OEM 755,543. GMIA 402,138. Children's Court 287,594. Facilities/BHD 309,208. Highway 140,996. DA 49,901. GMIA FD 31,524. Parks 163. Not listed in above are: GFPD (BU) 1,667. 128th 43,503. FireBell 836. ARES 19. Southridge 1
** User Fees from 2015 were a total of \$50,136 from IGA holders and \$1,581,570 from MC departments

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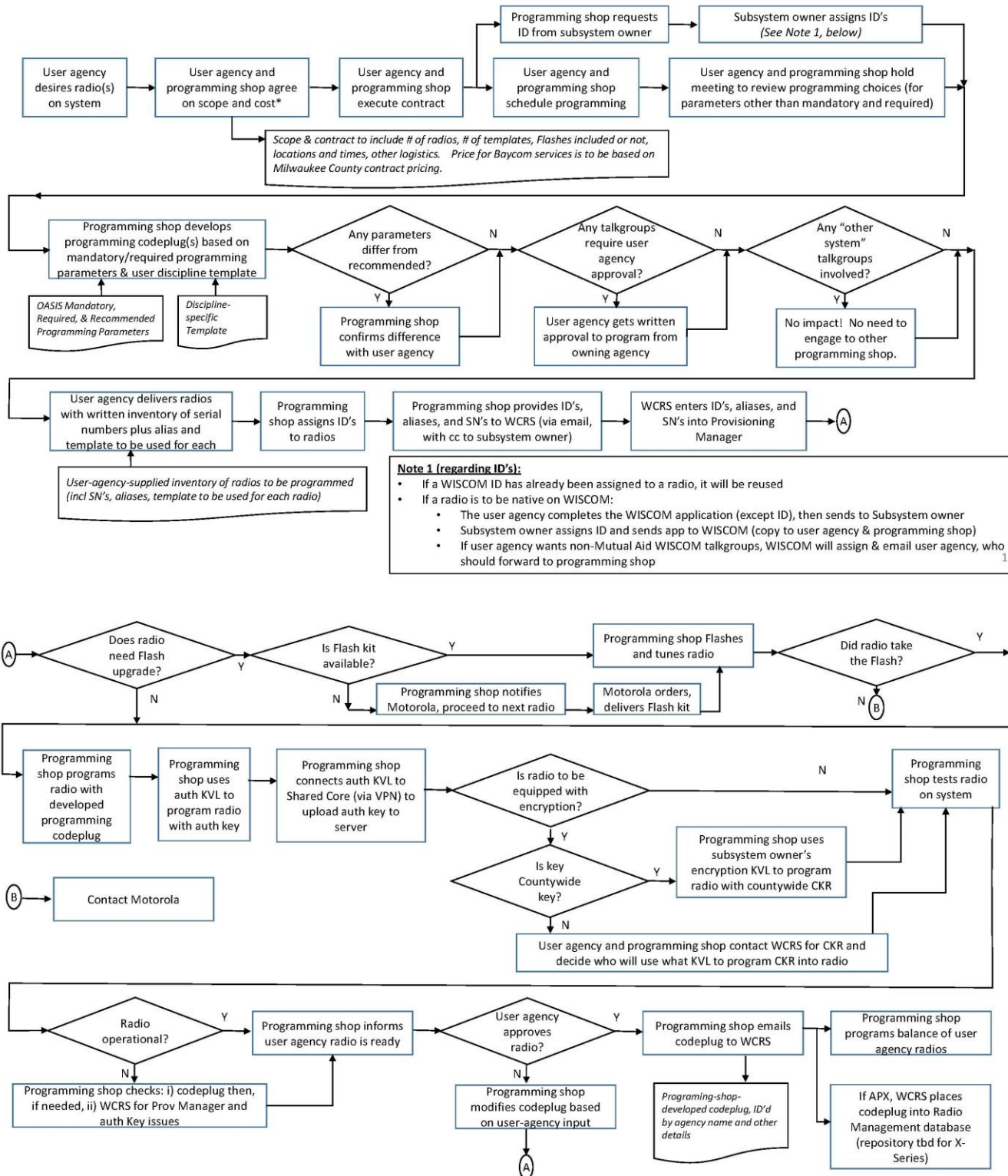
**OASIS Public Safety Radio
Governance Board 2017 Annual Report**

**APPENDIX C: Milwaukee County OEM Radio Services 2018 Annual
Operating/Maintenance Budget**

OASIS 2018 O&M BUDGET (RADIO SERVICES DIVISION)	
<u>Revenue Summary (2018)</u>	
Charges to Revenue Departments	\$ 757,680.00
Municipal Radio Charges	\$320,688.00
Direct Property Tax Levy	\$ 474,709.11
TOTAL REVENUE	\$1,553,077.11
<u>Expenditure Summary (2018)</u>	
PERSONAL SERVICES	\$238,165.00
COMMODITIES/ SERVICES	\$1,314,911.11
CROSSCHARGES	\$1.00
TOTAL EXPENDITURES	\$1,553,077.11
<u>Expenditure Details (2018)</u>	
PERSONAL SERVICES	
SALARIES-WAGES BUDGET	\$208,014.00
OVERTIME	\$6,000.00
SOCIAL SECURITY TAXES	\$15,910.00
ADJ-SOCIAL SEC TAXES	\$0.00
OPEB LIABILITY	\$7,947.00
COMPENSATED ABSENCES	\$294.00
EMPLOYEE HEALTH CARE	\$0.00
EMPLOYEE PENSION	\$0.00
LEGACY HEALTHCARE	\$0.00
LEGACY PENSION	\$0.00
TOTAL PERSONAL SERVICES	\$238,165.00
CROSSCHARGES	
TECHNICAL SUPPORT & INFRASTRCT	\$0.00
R/M COMPUTER EQUIP CHARGES	\$0.00
APPLICATIONS CHGS--NETWORK	\$0.00
HRIS ALLOCATION	\$0.00
IMSD CENTRAL PURCHASES	\$0.00
HOC GRAPHICS	\$1.00
TOTAL CROSSCHARGES	\$1.00
COMMODITIES/ SERVICES	
MEMBERSHIP DUES	\$150.00
ELECTRICITY	\$50,000.00
NATURAL GAS	\$927.00
TEL AND TEL OUTSIDE VEN	\$29,945.00
FIRE PROTECTION	\$1,000.00
BUILDING AND SPACE RENTAL	\$241,772.61
R/M-BLDG AND STRUCTURES	\$11,000.00
R/M GROUNDS	\$4,000.00
R/M MACHINERY TOOLS EQ	\$957,880.50
R/M RADIOS TRANSMTRS	\$13,860.00
FLEET VEHICLE	\$0.00
Fuel	\$600.00
AUTO ALLOWANCE	\$500.00
CONFERENCE EXPENSES	\$2,000.00
HARDWARE & OTHER MATERIAL	\$676.00
OFFICE SUPPLIES	\$300.00
MINOR OFFICE EQUIPMENT	\$300.00
TOTAL COMMODITIES/SERVICES	\$1,314,911.11

OASIS Public Safety Radio Governance Board 2017 Annual Report

APPENDIX D: Process for Provisioning an OASIS User Radio (Software Updates and Programming)



Certificate Of Completion

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	Milwaukee, WI 53203
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Andy Pederson
apederson@baysidewi.gov
Security Level: Email, Account Authentication (None)

Signature

DocuSigned by:

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Using IP Address: 207.67.101.116

Timestamp

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Signed: 6/6/2017 12:41:39 PM

Electronic Record and Signature Disclosure:

Accepted: 6/6/2017 12:41:17 PM
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Christine Westrich
christine.westrich@milwaukeecountywi.gov
Director, OEM
Security Level: Email, Account Authentication (None)

DocuSigned by:

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In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
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Certified Delivered	Security Checked	6/6/2017 2:38:38 PM
Signing Complete	Security Checked	6/6/2017 2:40:32 PM

Envelope Summary Events	Status	Timestamps
Completed	Security Checked	6/6/2017 2:40:32 PM
Payment Events	Status	Timestamps
Electronic Record and Signature Disclosure		

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If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. To indicate to us that you are changing your mind, you must withdraw your consent using the DocuSign 'Withdraw Consent' form on the signing page of your DocuSign account. This will indicate to us that you have withdrawn your consent to receive required notices and disclosures electronically from us and you will no longer be able to use your DocuSign Express user account to receive required notices and consents electronically from us or to sign electronically documents from us.

All notices and disclosures will be sent to you electronically

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through your DocuSign user account all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

How to contact Wisconsin Milwaukee County:

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:

To contact us by email send messages to: plee@milwcnty.com

To advise Wisconsin Milwaukee County of your new e-mail address

To let us know of a change in your e-mail address where we should send notices and disclosures electronically to you, you must send an email message to us at plee@milwcnty.com and in the body of such request you must state: your previous e-mail address, your new e-mail address. We do not require any other information from you to change your email address..

In addition, you must notify DocuSign, Inc to arrange for your new email address to be reflected in your DocuSign account by following the process for changing e-mail in DocuSign.

To request paper copies from Wisconsin Milwaukee County

To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an e-mail to plee@milwcnty.com and in the body of such request you must state your e-mail address, full name, US Postal address, and telephone number. We will bill you for any fees at that time, if any.

To withdraw your consent with Wisconsin Milwaukee County

To inform us that you no longer want to receive future notices and disclosures in electronic format you may:

- i. decline to sign a document from within your DocuSign account, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;
- ii. send us an e-mail to plee@milwcnty.com and in the body of such request you must state your e-mail, full name, IS Postal Address, telephone number, and account number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

Required hardware and software

Operating Systems:	Windows2000? or WindowsXP?
Browsers (for SENDERS):	Internet Explorer 6.0? or above
Browsers (for SIGNERS):	Internet Explorer 6.0?, Mozilla FireFox 1.0, NetScape 7.2 (or above)
Email:	Access to a valid email account
Screen Resolution:	800 x 600 minimum
Enabled Security Settings:	<ul style="list-style-type: none">• Allow per session cookies• Users accessing the internet behind a Proxy Server must enable HTTP

	1.1 settings via proxy connection
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** These minimum requirements are subject to change. If these requirements change, we will provide you with an email message at the email address we have on file for you at that time providing you with the revised hardware and software requirements, at which time you will have the right to withdraw your consent.

Acknowledging your access and consent to receive materials electronically

To confirm to us that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please verify that you were able to read this electronic disclosure and that you also were able to print on paper or electronically save this page for your future reference and access or that you were able to e-mail this disclosure and consent to an address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format on the terms and conditions described above, please let us know by clicking the 'I agree' button below.

By checking the 'I Agree' box, I confirm that:

- I can access and read this Electronic CONSENT TO ELECTRONIC RECEIPT OF ELECTRONIC CONSUMER DISCLOSURES document; and
- I can print on paper the disclosure or save or send the disclosure to a place where I can print it, for future reference and access; and
- Until or unless I notify Wisconsin Milwaukee County as described above, I consent to receive from exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to me by Wisconsin Milwaukee County during the course of my relationship with you.